



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,280	05/25/2001	Hajime Kimura	740756-2317	1263

22204 7590 05/13/2005

NIXON PEABODY, LLP
401 9TH STREET, NW
SUITE 900
WASHINGTON, DC 20004-2128

EXAMINER

YE, LIN

ART UNIT	PAPER NUMBER
----------	--------------

2615

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/864,280

Applicant(s)

KIMURA, HAJIME

Examiner

Lin Ye

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-88 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-88 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-9 filed on 2/22/02 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 19-20, 67, 77, 82 and 87 rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita et al. U.S. Patent 6,072,206 in view of Roberts U.S. Patent 5,541,654 and Morris et al. U.S. Patent 6,665,010.

Referring to claim 1, the Yamashita reference discloses in Figure 1, a driving method of a MOS sensor (See Col. 1, lines 10-11) comprising a plurality of pixels in an image pick up unit, each of said pixels comprising: a reset transistor (8, see Col. 1, line 20); a photoelectric conversion element (2, see Col. 1, lines 14-15) having a first terminal connected to one of source or drain terminals of said reset transistor, and a second terminal connected to a photoelectric conversion element side power source line; a reset signal line (14, see Col. 1, line 29) electrically connected to a gate terminal of said reset transistor (8); a signal amplifier

circuit (amplifying transistor 4, see Col. 1, line 15) having an input terminal connected to said one of the source or drain terminals of said reset transistor (8); and a reset side power source line connected to other one of the source or drain terminals of said reset transistor, said method comprising the steps of: sequentially selecting the plurality of pixels to output image signals by horizontal address line (12) (See Col. 1, lines 42-60). However the Yamashita reference does not explicitly show the method to reset said plurality of pixels at a **same time**; selecting a **part** of said plurality of pixels to output signals of the selected pixels.

The Roberts reference teaches in Figures 1 and 6, an image MOS sensor (10) allows the pixels of the array to all be simultaneously reset (See Col. 11, lines 60-65); and the control circuit (32) selecting at least a part of the pixels to output signals of the selected pixels (i.e., windows 172 or 174 as shown in Figure 6, see Col. 13, lines 20-25 and Col.10, lines 9-21). The Roberts reference is evidence that one of ordinary skill in the art at the time to see more advantages the image MOS sensor can simultaneously reset all the pixels and be able to select a part of the pixels to output image information so that all the pixels start the integration (storage) in the same time and to be selected to exclude unwanted or undesirable image information. For that reason, it would have been obvious to one of ordinary skill in the art at the time to modify the mage sensor of Yamashita ('206) for providing the method to reset said plurality of pixels in the MOS sensor at a **same time**; selecting a **part** of said plurality of pixels to output signals of the selected pixels as taught by Roberts ('654)

The Yamashita reference does not explicitly disclose the method for imaging a first object on trial and imaging a second object ordinary.

The Morris reference discloses in Figures 5-11, a digital imager has a **premetering** mode for imaging a first object on trial; all the plurality of the pixels reset simultaneously (globally initialized) and a normal mode for imaging a second object ordinarily (See Col. 3, lines 55-67 and Col. 4, lines 1-27). The Morris reference is evidence that one of ordinary skill in the art at the time to see more advantages that the digital imager imaging a first object on trial so that the storage period (duration of the integration intervals) for optimal exposures can be determined more accurately. For that reason, it would have been obvious to one of ordinary skill in the art at the time to modify the image sensor of Yamashita ('206) for providing a **premetering** mode to image a first object on trial and a normal mode to image a second object ordinarily as taught by Morris ('010).

Referring to claim 2, the Yamashita, Roberts and Morris references disclose all subject matter as discussed in respected claim 1, and the Roberts reference shows that the control circuit (32) can select the pixels of only a limited area (i.e. windows 72 or 74) of the image pickup unit (MOS sensor 10) to output signals from the selected pixels as shown in Figure 6 (See Col. 13, lines 20-25).

Referring to claim 19, the Yamashita, Roberts and Morris references disclose all subject matter as discussed in respected claim 1.

Referring to claim 20, the Yamashita, Roberts and Morris references disclose all subject matter as discussed in respected claim 2.

Referring to claim 67, the Yamashita, Roberts and Morris references disclose all subject matter as discussed in respected claim 1, and the Yamashita reference discloses the electronic apparatus is selected from digital still camera (MOS type solid state image sensor).

Referring to claim 77, the Yamashita, Roberts and Morris references disclose all subject matter as discussed in respected claim 1, and the Morris reference discloses wherein the first object is second object (e.g., the premetering mode for determining the optimal exposure time and the normal mode using the determined optimal exposure time from the premetering mode to image the object. This means that the object for imaging in the both modes should be same with same lighting conditions).

Referring to claim 82, the Yamashita, Roberts and Morris references disclose all subject matter as discussed in respected claim 19, the Morris reference discloses wherein the plurality of first pixels are the plurality of second pixels (same imager used in both premetering mode and normal mode).

Referring to claim 87, the Yamashita, Roberts and Morris references disclose all subject matter as discussed in respected claim 1.

4. Claims 3-18, 21-36, 48-56, 68-71, 73-76, 78-81, 83-86 and 88 rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita et al. U.S. Patent 6,072,206 in view of Roberts U.S. Patent 5,541,654, Morris et al. U.S. Patent 6,665,010 and Beiley U.S. Publication 2001/0007471.

Referring to claim 3, the Yamashita, Roberts and Morris references disclose all subject matter as discussed in respected claim 1, except that the Yamashita reference does not explicitly show determining a storage period in accordance with a period from the time of said resetting to a time when the signal of the selected pixels saturate.

The Bailey reference teaches in Figure 2, a method for controlling a MOS type image sensor including: determining a storage (integration) period in accordance with a period from the time of said resetting to a time when the signal of the pixel saturate (See page 2, [0029]). The Bailey reference is evidence that one of ordinary skill in the art at the time to see more advantages the image MOS sensor determining a storage (integration) period in accordance with a period from the time of said resetting to a time when the signal of the selected pixels saturate so that the storage period elapses before saturation of pixel occurs and the image signal can be accurately measured without any over blooming. For that reason, it would have been obvious to one of ordinary skill in the art to see the method to determine a storage period in accordance with a period from the time of said resetting to a time when the signal of the selected pixels saturate disclosed by Yamashita.

Referring to claim 4, the Yamashita, Roberts, Morris and Bailey references disclose all subject matter as discussed in respected claim 3, and the Bailey reference discloses one of the signals has largest signal amplitude (e.g., the pixel 100 in the group has reached to saturation level which represents the maximum intensity of light, see page 2, [0029]) among the signals of the selected pixels.

Referring to claim 5, the Yamashita, Roberts, Morris and Bailey references disclose all subject matter as discussed in respected claim 3.

Referring to claim 6, the Yamashita, Roberts, Morris and Bailey references disclose all subject matter as discussed in respected claim 4.

Referring to claim 7, the Yamashita, Roberts, Morris and Bailey references disclose all subject matter as discussed in respected claim 3, except that the Yamashita reference does

not explicitly states a value of said storage period is set by irradiating said image pick up unit with light having a highest intensity among lights which have been reflected by an object to enter said image pick up unit.

The Morris reference discloses in Figures 5-11, a digital imager has a premetering mode (See Col. 3, lines 63); and sets a storage period (integration time T_{INT}) based on irradiating the imager with light having a highest intensity among lights (e.g., when ninety percent of the maximum possible energy has been received by the group 113, See Col. 4, lines 37-45). The Morris reference is evidence that one of ordinary skill in the art at the time to see more advantages the storage period set by irradiating the image pick up unit with light having a highest intensity among lights when the imager has the brightness of a different portion, so that the primary storage period can be determined and the dynamic rang of captured imaged can be optimized. For that reason, it would have been obvious to one of ordinary skill in the art to see the value of said storage period is set by irradiating said image pick up unit with light having a highest intensity among lights which have been reflected by an object to enter said image pick up unit disclosed by Yamashita.

Referring to claim 8, the Yamashita, Roberts, Morris and Bailey references disclose all subject matter as discussed in respected claim 7.

Referring to claim 9, the Yamashita, Roberts, Morris and Bailey references disclose all subject matter as discussed in respected claim 7.

Referring to claim 10, the Yamashita, Roberts, Morris and Bailey references disclose all subject matter as discussed in respected claim 7.

Referring to claim 11, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 3, and the Roberts reference discloses wherein the signals are outputted exclusively from those of the plurality of pixels of said image pick up unit that belong to a limited area (i.e., windows 172 and 174 in Figure 6, see Col. 13, lines 20-30).

Referring to claim 12, the Yamashita, Roberts, Morris and Beiley references all subject matter as discussed in respected claim 11.

Referring to claim 13, the Yamashita, Roberts, Morris and Beiley references all subject matter as discussed in respected claim 11.

Referring to claim 14, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 11.

Referring to claim 15, the Yamashita, Roberts, Morris and Beiley references all subject matter as discussed in respected claim 3, and the Roberts reference discloses wherein the image of an object is picked up by using said storage period (integration period or exposure period).

Referring to claim 16, the Yamashita, Roberts, Morris and Beiley references all subject matter as discussed in respected claim 15.

Referring to claim 17, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 15.

Referring to claim 18, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 15.

Referring to claim 21, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 3.

Referring to claim 22, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 4.

Referring to claim 23, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 5.

Referring to claim 24, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 6.

Referring to claim 25, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 7.

Referring to claim 26, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 7.

Referring to claim 27, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 7.

Referring to claim 28, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 7.

Referring to claim 29, the Yamashita, Roberts, Morris and Beiley references all subject matter as discussed in respected claim 11.

Referring to claim 30, the Yamashita, Roberts and Beiley references disclose all subject matter as discussed in respected claim 11.

Referring to claim 31, the Yamashita, Roberts and Beiley references disclose all subject matter as discussed in respected claims 11 and 25.

Referring to claim 32, the Yamashita, Roberts and Beiley references disclose all subject matter as discussed in respected claims 11 and 26.

Referring to claim 33, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 17.

Referring to claim 34, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 17.

Referring to claim 35, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 17 and 25.

Referring to claim 36, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 17 and 26.

Referring to claim 48, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 5, and the Yamashita discloses a mobile information terminal (a solid state image sensor for digital camera) using the MOS sensor.

Referring to claim 49, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 48.

Referring to claim 50, the Yamashita, Roberts and Beiley references disclose all subject matter as discussed in respected claim 48.

Referring to claim 51, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 48.

Referring to claim 52, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claims 10 and 50.

Referring to claim 53, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 48.

Referring to claim 54, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 48.

Referring to claim 55, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 50.

Referring to claim 56, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 48.

Referring to claim 68, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claims 3 and 67.

Referring to claim 69, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claims 4 and 67.

Referring to claim 70, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claims 5 and 67.

Referring to claim 71, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claims 6 and 67.

Referring to claim 73, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claims 12 and 67.

Referring to claim 74, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claims 13 and 67.

Referring to claim 75, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claims 14 and 67.

Art Unit: 2615

Referring to claim 76, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claims 15 and 67.

Referring to claim 78, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 77.

Referring to claim 79, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 77.

Referring to claim 80, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 77.

Referring to claim 81, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 77.

Referring to claim 83, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 82.

Referring to claim 84, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 82.

Referring to claim 85, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 82.

Referring to claim 86, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 82.

Referring to claim 88, the Yamashita, Roberts, Morris and Beiley references disclose all subject matter as discussed in respected claim 3.

Art Unit: 2615

5. Claims 37-47, 57-66 and 72 rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita et al. U.S. Patent 6,072,206 in view of Roberts U.S. Patent 5,541,654, Morris et al. U.S. Patent 6,665,010, Bailey U.S. Publication 2001/0007471 and Kamiko U.S. Patent 5,991,467.

Referring to claims 37-47, 57-66 and 72, the Yamashita, Roberts, Morris and Bailey references disclose all subject matter as discussed in respected claims 1, 3-6 and 10, except that the Yamashita reference does not explicitly states a fingerprint scanner using the MOS sensor.

The Kamiko reference discloses in Figures 15-18, an inexpensive, miniaturized fingerprint scanner (22, see Col. 13, lines 13-15) using a two-dimensional MOS image sensor (See Col. 12, lines 8-24). The Kamiko reference is evidence that one of ordinary skill in the art at the time to see more advantages the image MOS sensor is used into the fingerprint scanner so that scanner can be more compact and portable than the regular CCD fingerprint scanner. For that reason, it would have been obvious to see the MOS sensor is used into the fingerprint scanner disclosed by Yamashita.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

Art Unit: 2615

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - a. Nakamura et al. U.S 6,879,344 discloses a CMOS finger photosensor system imaging a first object on trail and imaging a second object ordinarily in Figure 10.
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Ye whose telephone number is (571) 272-7372. The examiner can normally be reached on Mon-Fri 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Groody can be reached on (571) 272-7950. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2615

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lin Ye
May 9, 2005


James J. Groody
Supervisory Patent Examiner
Art Unit 262 2616